

*** THE NUMBER OF LIFTING STRANDS SHALL BE BASED ON 10 KIPS PER EACH 1/2"Ø STRAND & 14 KIPS PER EACH 0.6"Ø LIFTING STRAND.

LIFTING LOOPS
2 - 1/2"Ø OR
0.6"Ø STRANDS

PICKUP
FORCE
60° MIN.
90° MAX.

C.G. TOTAL
HARPED STRANDS

3/4" x 3 1/2" x 7" SHEAR KEYS.
OMIT AT EXTERIOR FACE
OF EXTERIOR GIRDERS

2 UNIT HOLD DOWN
6" MIN., - 1'-6" MAX.

INTERMEDIATE DIAPHRAGM

MID-POINT OF SPAN FOR SPAN LENGTHS
40'-0" TO 80'-0". NO INTERMEDIATE DIAPHRAGM
FOR SPAN LENGTHS 40'-0" OR LESS

** 6 : 1 FOR 1/2"Ø STRANDS &
8 : 1 FOR 0.6"Ø STRANDS

DIAPHRAGM

APPLY APPROVED
RETARDANT FOR
1/4" ETCH TO SIDE
FORMS OR 1/4"
ROUGHENED SURFACE
TREATMENT BY APPROVED
MECHANICAL METHOD

** MAX. SLOPE

* SEE OPEN HOLE
DETAIL THIS SHEET

END TYPE B

END TYPE A

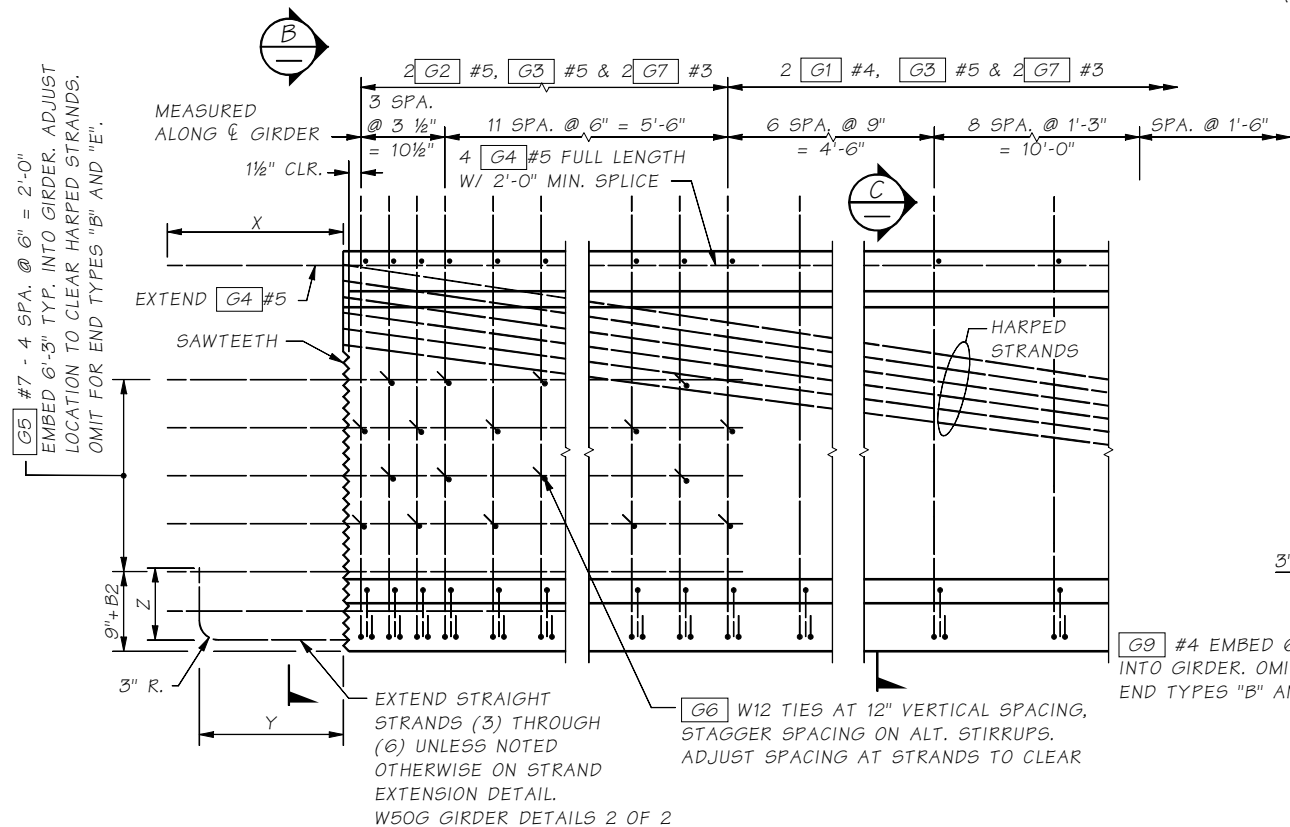
GIRDER ELEVATION

* OMIT HOLES AND PLACE INSERTS ON THE INTERIOR FACE
OF EXTERIOR GIRDERS. PLACE HOLES AND INSERTS
PARALLEL TO SKEW. INSERTS SHALL BE 1" BURKE HI-TENSILE,
LANCASTER MALLEABLE, DAYTON-SUPERIOR F-62 FLARED
THIN SLAB (1" x 4 5/8") FERRULE OR APPROVED EQUAL. (TYP.)

OPEN HOLE

BOTTOM HOLE AT
END TYPE "B" ONLY

- ALL DETAILS ON THIS SHEET ARE FOR PRETENSIONED DESIGN ONLY.
- PLAN LENGTH SHALL BE INCREASED AS NECESSARY TO COMPENSATE FOR SHORTENING DUE TO PRESTRESS AND SHRINKAGE.
- EXTRA CAUTION MUST BE EXERCISED IN HANDLING AND PLACING ALL GIRDERS.
- THE GIRDERS MAY NEED TO BE BRACED LATERALLY DURING SHIPPING TO PREVENT TIPPING OR BUCKLING.
- THE TOP SURFACE OF THE GIRDER FLANGE SHALL BE ROUGHENED IN ACCORDANCE WITH SECTION 6-02.3(25)H OF THE STANDARD SPECIFICATIONS.
- IF THE LIFTING LOOPS EXTEND WITHIN 3" OF THE TOP OF THE ROADWAY SLAB, THEY SHALL BE CUT OFF PRIOR TO PLACING THE ROADWAY SLAB. ALL LIFTING STRANDS SHALL BE OF THE SAME MATERIAL AND STRENGTH AS THE PRESTRESSING STRANDS. WRAP THE LIFTING LOOPS SO THAT EACH STRAND WILL CARRY ITS SHARE OF THE TOTAL LOAD. EXTEND LIFTING LOOPS ENDING WITH A 9" LONG 90° HOOK TO WITHIN 3" CLEAR OF THE BOTTOM OF THE GIRDER.
- FOR END TYPES A, C AND D, CUT ALL STRANDS FLUSH WITH THE GIRDER ENDS AND PAINT WITH AN APPROVED EPOXY RESIN, EXCEPT FOR EXTENDED STRANDS AS SHOWN. FOR END TYPES B AND E CUT ALL STRANDS 1" BELOW CONCRETE SURFACE AND GROUT WITH AN APPROVED EPOXY GROUT.
- FORMS FOR BEARING PAD RECESSES SHALL BE CONSTRUCTED AND FASTENED IN SUCH A MANNER AS TO NOT CAUSE DAMAGE TO THE GIRDER DURING THE STRAND RELEASE OPERATION.
- ALL STRANDS SHALL BE 1/2" OR 0.6" Ø LOW RELAXATION STRANDS (AASHTO M203 GRADE 270.)
- FOR SAWTOOTH DETAIL SEE W50G GIRDER DETAILS 2 OF 2.



TYPICAL END ELEVATION

END OF TYPE C SHOWN, OTHER END TYPES SIMILAR

FOR END TYPE "C"

ENDS AHEAD ON STATION

[G5] BARS LEFT OF G
B1 = 0" ([G4], [G9])

B2 = 0" ([G5])

ENDS BACK ON STATION

[G5] BARS RIGHT OF G
B1 = 1 1/2" ([G4], [G9])

B2 = 3" ([G5])

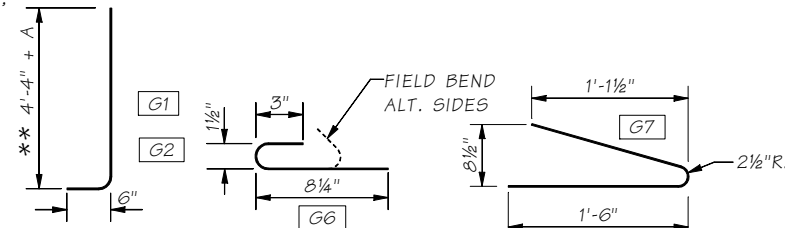
VIEW B
SAWTEETH
SHOWN BY HATCHED AREA

MARK	LOCATION	SIZE
G1	GIRDER STIRRUPS	4
G2	GIRDER END STIRRUPS	5
G3	GIRDER TOP FLANGE	5 STR.
G4	GIRDER LONGIT. FULL LENGTH	5 STR.
G5	GIRDER END LONGIT.	7 STR.
G6	GIRDER END TIES	W12 #
G7	GIRDER BOT. FLANGE TIES	3
G9	GIRDER END LONGIT.	4 STR.

#3 OR #4 MAY BE SUBSTITUTED.
FIELD BEND IS OPTIONAL.

BENDING DIAGRAM (ALL DIMENSIONS ARE OUT TO OUT)

NOTE: FOR DIM. "A",
SEE GIRDER
SCHEDULE



** SHALL BE CHECKED FOR THE EFFECT OF RDWY VERTICAL CURVE

DIAPHRAGM TYPE	END TYPE	BEARING RECESS	X	Y	Z	SAWTEETH
END DIAPH. ON GIRDER	A	YES	1'-10"	1'-6"	9"	YES
"L" ABUTMENT	B	YES	0"	0"	0"	NO
HINGE DIAPH. ON INTERM. PIER	C	NO	1'-10"	1'-6"	9"	YES
FIXED DIAPH. @ INTERM. PIER	D	NO	1'-10"	ALT. 1 OR ALT. 2 STRAND EXTEN.		YES
MULT. SIMPLE SPANS @ INTERM. PIER	E	YES	0"	0"	0"	NO

SR JOB NO. SHEET

5.6-A4-1

Bridge Design Engr.	M:\STANDARDS\Girders\I-Girders\W50G\W50G1.man	REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor		10	WASH.			
Designed By						
Checked By						
Detailed By						
Bridge Projects Engr.						
Prelim. Plan By						
Architect/Specialist	DATE	REVISION	BY	APPD		

BRIDGE
AND
STRUCTURES
OFFICE



Washington State
Department of Transportation

STANDARD
PRESTRESSED CONCRETE GIRDERS

W50G GIRDER
DETAILS 1 OF 2

BRIDGE
SHEET NO.
OF
SHEETS